



The President's Corner

by Mickey Breunig, President - LMAC



I hope that everyone had a great holiday season and got the airplane they wanted for Christmas. I am looking forward to the new year of flying. A time to fly a few new planes I am working on now as well as getting a bit more familiar with some I have had for a while. As with every year, the flying will be an adventure. I am very grateful to be able to enjoy the new adventures with many friends. It's also a new year for the club.

With every new club year comes the time to pay your AMA and LMAC club dues as well as to exchange your gate key. Your club dues can be paid to Carroll Ware, the Club treasurer. Applications are available on the LMAC website and can be mailed with your key to Carroll or you can see him at the club meeting. Carroll's mailing address is on the bottom of the application form.

We have several events planned for this year, some you are familiar with as well as some new ones. Keep an eye on the newsletter for more information on the events as the details are finalized. We started the year off with the Numb Thumbs event on January 1st.

I would like to remind everyone that this year we need to wear our AMA card at the airfield. The club will supply each member with a plastic badge to hold your card. These can be worn in many different ways. We will post some pictures in the upcoming newsletters with examples of different ways your AMA card can be displayed.

I would like to thank Gayle Yarnell for serving as the President for the last few years. He did a very good job keeping the club running smoothly. Gayle was unselfish with his time as he handled club business, and we are all grateful.

Mickey Breunig

President - Lexington Model Airplane Club



Minutes of December 8th, 2016 Club Meeting

by Bob Cooper

The club meeting was held on December 8th, 2016 at Morning Pointe Senior Center, 150 Shoreside Dr, Lexington, KY.

Meeting was called to order at 7:01pm by Gayle Yarnell.

Minutes of the November meeting were posted in newsletter. Motion to approve the minutes was made by Gayle Yarnell, seconded by Joe Woods and passed by vote.

Treasurers Report was given by Carroll Ware. The club has 132 members. The bank account is at \$15,042.31 and savings account is at \$621.05. Treasurer's Report was approved.

Training report by Gary Hyde indicated no activity during these winter months.

Inventing Flight report was given by Dan Thompson. There will be an after school activity at a future date.

Safety Report was presented by Mike Lambert with no new safety issue.

Old Business:

-- Swap Meet report was presented by Joe Woods. Income was \$1,253. for the event. A full report was documented in the December 2016 newsletter.

-- Airfield projects for 2017 were discussed. Plans are to apply vinyl siding to the equipment shed at a future, convenient date.

-- The new Pilot's AMA Card display procedure was approved in November. Implementation plans for 2017 were discussed. Carroll Ware plans to purchase plastic holders for AMA cards for members to wear at the airfield. The plastic holders will be distributed when members renew their club membership and receives gate keys. More details coming.

-- Airfield key exchange process for 2017 was discussed. Pilots must exchange their 2016 airfield keys for new 2017 airfield keys with Carroll Ware, Treasurer when club dues are paid. Everyone is asked to pay their 2017 club dues, now. The old 2016 pad lock and new 2017 padlock will be on the airfield gate until April 1, 2017 at which time everyone should have new 2017 airfield keys. The old 2016 padlock will be removed from the airfield gate on April 1, 2017.

(Continued on next page)

(Continued from previous page)

New Business:

- Fall Classic donations to charity was discussed by Curtis Adams. The 2016 donations are \$1,000. to each charity of these two charities, Cardinal Hill and Kids Cancer Alliance. Future donations in 2017 will be determined the LMAC board at the appropriate time.
- Numb Thumb Fly-in event will be held on January 1, 2017. Mickey will be providing a Chili lunch and hot dogs.
- Landfill update was presented by David Price. The Landfill manager, James McCarthy, said that they are going to clean up the vegetation on the fence lines on Hedger Lane. This will take place sometime in April 2017. They have hired a contractor that will help maintain the fence lines.
- Website domain name lease is due to be paid by January 11, 2017 at a cost of \$20 for one year per Bob Cooper. The expenditure was approved.

A motion was made by Gayle Yarnell to adjourn the meeting at 7:52PM. The motion was 2nd by Bob Stewart and approved by vote.

The next meeting will be at 7:00 pm, Thursday, January 12, 2017 at Morning Pointe Senior Center, 150 Shoreside Dr, Lexington, KY.

The Coyote Hobbies Model of the Month Gift Certificate was won by David Price.

2017 Club Membership Dues



Reminder, it is time to pay
your club membership dues for 2017.
No flying until dues paid.

Obtain your **2017 Membership Renewal form**
on the LMAC website ([click here](#)).

Old airfield gate lock to be removed on April 1st.

New for 2017 -- Display AMA Card on your person at airfield.

Treasurer's Report

by Carroll Ware, Treasurer



Reminder, its time to pay your club dues for 2017 to Club Treasurer, Carroll Ware. Turn in your old airfield gate key. For dues information and forms, click on this link

<http://www.lmacky.org/membership.html>

Educational Savings Account Report \$621.57

Funds provided by the Lex. City Council for use in Fayette County School programs.

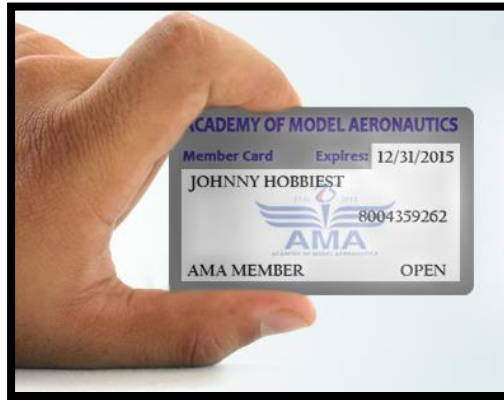
Income and Expense Report

Date	Num	Transaction	Payment	C	Deposit	Balance
12/8/2016	EFT	K.U. cat: Utilities:Gas & Electric	32.66			14,830.45
12/21/2016	2442	EASTER SEAL CARDINAL HILL cat: Charity	1,000.00			13,830.45
12/21/2016	2443	KIDS CANCER ALLIANCE cat: Charity	1,000.00			12,830.45
12/29/2016	debit	Office Depot cat: Office Suppiles memo: Paper, Env, Stamps	172.40			12,658.05
1/3/2017	debit	Office Depot cat: Office Suppiles memo: Name Badges	63.57			12,594.48



New LMAC Clip-on AMA Card Holder

by Carroll Ware, Club Treasurer



Something new for 2017, the club has voted to provide an AMA Card holder to be worn on your person at airfield. Displaying your AMA card will help everyone to get to know one another better, as well as help ensure that only current members are utilizing the airfield per LFUCG and LMAC requirement.

When dues are paid, you will receive the AMA card holder with your 2017 club membership sticker. Insert your AMA card in the badge holder. Pickup a shirt clip for your AMA card holder in the first aid box at the airfield shelter. You are welcome to use your own method of displaying your AMA card as long as your name, club sticker and AMA expiration date are visible on your person at the airfield.

If you have the old 2016 airfield gate key, you will need to return it to me. I will exchange it for the 2017 gate key. If you did not have a key and want one, then send a \$5.00 refundable deposit to me and I will send you a 2017 key. Your old key and/or money can be given to me at a club meeting or at the airfield. The old airfield lock to be removed April 1, 2017.

Remember, it is time to pay your club membership dues for 2017. No flying until dues paid. Obtain your 2017 membership renewal form on the LMAC website ([click here](#)), fill out the form, attach a check and send to me.

When you pay your dues, you will receive a peel-off 2017 membership sticker that you need to stick to the front of your current AMA card. Display card at airfield.
No card-No fly.

Feel free to email or call me, if you have any questions.

Fly safe and have fun!

Carroll Ware carroll.ware@gmail.com

859-576-8040

LMAC Treasurer



Model of the Month

David Price won the Coyote Hobbies *Model of the Month* award with his Dynam Meteor EPO Foam Jet. This model is an 70mm Electric Ducted Fan model purchased used at a swap meet. It has a 36 inch wing span and weighs 38 ounces. Electric power comes from 4 cell 3000mah lipo battery. Dave did some repairs and repaint to make it flyable again.

Congratulations to Dave with his winning entry for the Coyote Hobbies gift card !!



New Year's Day Numb Thumb Event Report

by Mickey Breunig, Club President

The Numb Thumbs Event was just held on the January 1st, 2017 at the airfield, and was a lot of fun for those who participated. The weather turned out very nice for the time of year with the temperatures in the mid 40s and the wind less than 10mph.

Everyone stayed warm and were well fed from the provided lunch. There was a large pot of hot chili, perfectly grilled hot dogs, and hot coffee. There was even the oddly popular home-made banana ice cream. Yes, you read that correct. I would like to thank Matt Hanson for the hot dogs and making a good strong pot of coffee. Thanks to Jim Jackson for making his always popular ice cream. It's hard for me to comment on how good the chili was, but it was an empty pot at the end of the day.



Recent Donations to Charity

by *Curtis Adams, Club Senior Advisor*



The following announcement was sent out to AMA representatives for publication in Model Aviation magazine, local radio station WVLK, Hobbico representative Frank Noll, LFUCG and other individuals and organizations. A picture is attached of the donation.



Lexington Model Airplane Club members; Sylvester Hale, Carroll Ware, Mickey Bruenig, Gale Moore, Curtis Adams and Dick Suffoletta met with Jenny Wurzback and Cindy Jacobelli of Cardinal Hill at Cracker Barrel to make our annual donation. Dick Suffoletta also represented The Kids Cancer Alliance. Jenny Wurzback received the donation for Easter Seals Cardinal and Dick Suffoletta received the donation for The Kids Cancer Alliance. LMAC is proud to have been making this donation for the last 12 years and we hope to continue. This donation is made possible by the proceeds from the Kentucky Fall Classic Fly-in held each year the 3rd weekend of September. We would like to thank the pilots and spectators that come out to this event and make it possible for us to make this annual donation of \$1000.00 each to these wonderful organizations.

I would also like to point out that Cardinal Hill now considers LMAC a community partner. The significance of this is that the entire Cardinal Hill organization is aware of LMAC's support for their organization. This designation was recently made public in a Cardinal Hill newsletter sent to supporters and the Cardinal Hill Family. I will share more about this with the club members at the next meeting.

By the time you receive this newsletter we will have had the first meeting to discuss the 2017 Kentucky Fall Classic Fly-in. This year, we are taking a different approach to organizing the fly-in by bringing more people onboard. My goal is to put people in place that could run the fly-in should key people decide to step down from Fly-in. This is important to maintain continuity for the future. This first meeting will be mostly discussion about what we have done right and what we can do better. Also I hope to get volunteers to handle key areas of responsibility during this first meeting. I also hope the group can come up with a few goals for the 2017 Fly-in. One last thing. While there will be a core group of people responsible for the fly-in that doesn't mean we can't use additional help and ideas. We urge all club members to participate in the fly-in in any way they can.

Blast from the Past

by David Price



This series of articles will present advertisements from vintage modeling magazines. The intent is to illustrate technological advances that have taken place in our hobby. For some, it will bring back memories, for newcomers it will present a piece of history of radio control model aviation.

Here is an advertisement for “The Flea” gas-type rubber powered model airplane from the February 1938 issue of Model Airplane News. The plane was a free-flight, rubber-powered airplane with a “ratchet” device to simulate the sound of a gas engine. According to the ad, you get the “thrills of a real gas model flight without the expense”.

MODEL AIRPLANE NEWS
FEBRUARY 1958
47

All the thrills of gas model flight!

A remarkable model airplane developed especially for those enthusiasts who want the thrills of real gas model flight without the expense!

Wing Span 36 in.
Length 28 in. Weight 4 oz.

JIM CLARK'S FLEA shown below in the air on the 2 mile record flight.

The **FLEA** GAS TYPE RUBBER POWERED MODEL AIRPLANE—
FLIES LIKE A GAS MODEL!
LOOKS LIKE A GAS MODEL!!
SOUNDS LIKE A GAS MODEL!!!

- MOVABLE CONTROLS ON RUDDER AND ELEVATOR SHOCKPROOF GAS MODEL TYPE LANDING GEAR WITH PNEUMATIC M & M RUBBER WHEELS
- NEW TYPE BALL BEARING PROPELLER WASHER SPECIAL BROWN CONTEST RUBBER
- ADJUSTABLE WING WITH NEW TYPE CLIPS

Also includes the "Ratchet," a device that creates a sound like the hum of a real gas motor as the propeller turns in flight. All material for its construction included in the kit. Wing is adjustable forward or backward to trim balance with special clips built into under side to hold rubber strands which stretch around fuselage and hold wing in place.

The "Flea" is the next best thing to a genuine gas model and just the job to gain experience before tackling the real thing.

SCIENTIFIC MODEL AIRPLANE COMPANY
218-220 M-2 Market Street "Gas Model Headquarters"
In France: E. Kruger & Co., 9 Rue St. Sebastien, Paris.
In England: H. G. Brown, 26 Gough St., Birmingham.
In Australia: Swift Model Aircraft, 156 Adelaide St., Brisbane, Queensland.
In South Africa: Stratosphere Model Aircraft Supplies, P.O. Box 3248, Johannesburg.

\$1.95

COMPLETE KIT INCLUDING M&M PNEUMATIC RUBBER WHEELS

POSTPAID OR AT YOUR DEALER

FLIES 1/2 MILE!

KIT CONTAINS EVERYTHING

required to build a model. Completely turned wood cylinder and spark plug made in one piece; all wood parts for constructing crankcase, exhaust pipe, air intake, propeller, landing gear, fuselage, wing, rudder, elevator, etc. All parts are made of the highest quality wood. The propeller is made of a special wood impregnated with indurite film—free hatch in its machine cut holes avoid turbulence all rim, ballistics fastened and secured clearly pointed on firm grade balsa; balsa string carefully and evenly spaced; front, lateral, ventral, and dorsal, fuselage and rubber lubricated; shock absorbers made of rubber and brass; landing gear made of aluminum and brass; rubber knobs and all necessary material for building motor horn edge. Balsa ballast ball wheels, correct gauge wire for fork end wing clips and soft hinge wire for movable surfaces. Also a set of the most complete and easily understood plans.

READY TO FLY MONOPLANE
RED FLASH
The Red Flash is a completely built—nothing to do but fly it! 18 in. wing span and a wonderful flyer. Complete \$2.00. Construction 5/8 \$3.00.



Modern RC Pulse Decoder Receiver

by Dan Thompson, Club Vice President



The purpose of this development is to use modern circuits to replicate the Radio Control pulse systems of yesteryear. Also this allows the old servos to be used for pulse or galloping ghost systems using more modern transmitters and receivers which are very reliable.

Pulse decoder

The pulse systems of the 50's and 60's used a transmitter that sent a tone to the receiver that was pulsed in both symmetry and rate. The symmetry typically was 20/80 to 80/20 with 50/50 being neutral. The symmetry is used for the rudder. Elevator uses the rate function and converts the rate to a symmetry signal for the servo. The rate frequency varied from 2 to 20 pulses per second. Throttle is signaled by the tone being 100% on or off. During throttle operation, the rudder and elevator are centered or allowed to cycle which give an average of neutral.

Supply voltage

One typical battery supply in the early 60's was a three lead 4.8 volt NiCd battery pack that was tapped at 2.4 volts. The receiver section used the full 4.8 volts whereas the servos used 2.4 volts. At this time we didn't have H drive circuits to drive the servos in both directions with the same voltage. Reversal of the servo was done by using a simple transistor to select which side of the battery pack 2.4 voltage was used.

This decoder is unique in that it uses a single cell LIFEP04 battery of 3.3 volts. An on board voltage converter converts the 3.3 volts to 5 volts for the receiver. The servos are driven by H bridges and use the 3.3 volts.

Pulse servos

Pulse servos were made by a lot of manufacturers. The most common were the Bellamatics that were developed for reed systems. Bellamatics are spring centered and have a slip clutch that slips if the servo is driven to either extreme. They work fine as pulse servos. There are several other pulse servos that work very similar to the Bellamatic.

The Rand LR3 is for Galloping Ghost and operates Rudder, elevator and throttle.

The Rand HR2 is a LR3 with the elevator plate removed. As such it will operate the rudder and throttle.

The Rand HR1 is a single function servo and normally operates the elevator or could be the rudder servo for a single channel system. The early HR1 was similar to the HR2 but had a shorted frame. A later HR1 was released and was the HR2 with the throttle function removed. The new HR1 centers better than the previous HR1.

Depending on the origin of the Rand servos, they have different motors for different voltages. A couple of other makes were the World Engines Ghost and the GOAC. Similar servos were made with various electric motors. The old standby Mighty Midget motor was used in a lot of pulse servos.

(Continued on next page)

(Continued from previous page)

Mode definition

The decoder is microprocessor driven and it allows one unit to work with various combinations of pulse servos. The mode of operation is selected via the transmitter when the decoder is calibrated. Four different modes are select-able and allow various combinations of servos to be used.

Modes 0, 1 and 3 can use either the long or short decoder. Mode 2 requires the long decoder. The difference is the long version has the second H drive circuit.

How it works

Using a microprocessor to do the rate and throttle decoding allows flexibility in pulse system that heretofore was not available.

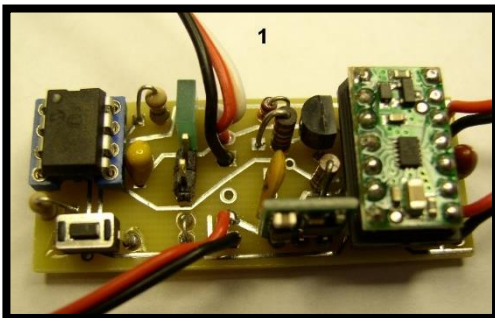
The decoder consists of servo drivers, signal conditioners, a voltage converter and a microprocessor.

The signal conditioner passes the signal to the rudder servo driver which is symmetry driven. The conditioned signal is also seen by the microprocessor. The microprocessor performs two functions. One is it changes the rate value of the signal to a symmetry signal that is sent to the elevator driver. The second function is the detection of the signal being all on or all off for throttle control and operating properly according to the mode selected.

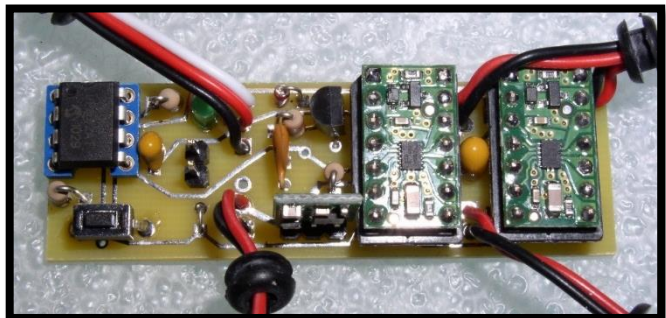
The Pulse Omission Detector function is dynamic in that the microprocessor measures every frame time and adjust the POD time accordingly. Currently, the next POD time is 150% of the last frame time. This allows a faster detection of the throttle function especially with the many different rates one can use. If a POD time is set for the lowest rate possible, the detection for the very fast rate is too slow and can cause servos to hit the end or cycle that is not desired. This is why you must re-calibrate if you change the neutral pulse rate.

One problem with a pulse system is that when the transmitter signal is lost, the receiver decoder thinks that low throttle is requested and it continuously drives the servos to low throttle. Where this is not desirable is when the airplane goes down out of range of the transmitter and runs the batteries down. This decoder allows 10 seconds for throttle operation. When the throttle signal is received for more than 10 seconds, the decoder shuts down the servo drive. If a proper pulse signal is received, the decoder resumes normal operation.

For complete documentation see <https://sites.google.com/site/stoneagerc/decoder-driver>



Decoder for driving two servos.



Decoder for driving three servos.

For Sale - Model Airplanes

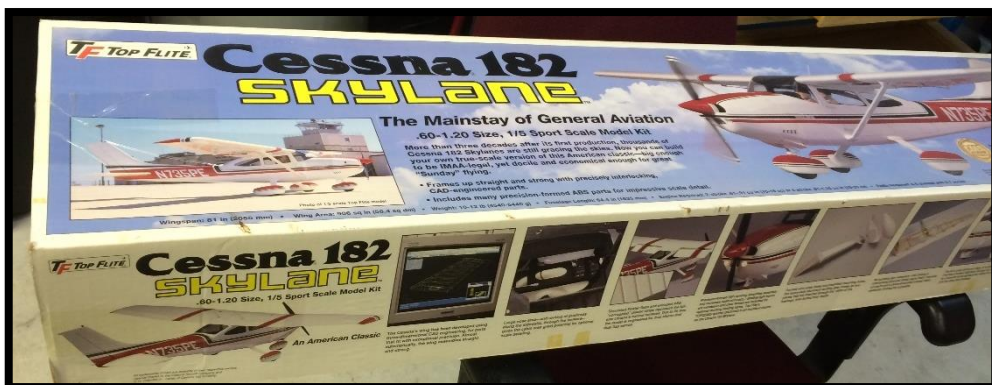


For Sale

1. eFlite AT6 Texan ARF
2. Topflite Giant Scale 182 Skylane kit

Click on this link for more details and photos... <http://www.lmacky.org/for-sale.html>

Phil Ingber LMAC Member
pingber@gmail.com
845-857-7351



SKYLINERS 27th ANNUAL SWAP MEET

RC & CL PLANES, ENGINES AND HARDWARE
TRAINS, BOATS AND OTHER MODEL INTERESTS

→ NO FOOD ON SITE ←

50 / 50 Raffle

→ **Shotgun Raffle** ←

→ DOOR PRIZES ←

SATURDAY, JANUARY 28th 2017

Clark County 4 – H Building

9608 Highway 62

Charlestown, Indiana 47111

9:30am until 2:00pm

PUBLIC ADDMISSION: \$5.00

DEALERS will be admitted at 8:30 am; ALL others will be at 9:30 am

DEALER FEES:

First 8 foot table - \$12.00 (with one admission)

Each additional 8 foot table - \$7.00 (with no extra admission)

First 6 foot table - \$10.00 (with one admission)

Each additional 6 foot table - \$5.00 (with no extra admission)

(Tables will be limited to allow adequate walking space)

FOR TABLES or INFORMATION CALL:

Mike Stinson 502-386-4446

dc8driver@hotmail.com

Floor Plan available on the "SKYLINERS" web site - <http://www.skyliners.us>

From Indianapolis

Take I-65 South towards Sellersburg, IN 47172

Interstate 65 Exit 9

Turn left onto IN 31

Turn right on IN 403

Turn right on IN-62 W to

Clark County 4-H Fairgrounds

Charlestown, IN 47111

From Louisville

Take I-65 N then IN-265 E to IN-62 E/E 10th St/Ohio River Scenic Byway in Utica.

Take exit 10B from IN-265 E/IN-62 E

14 min (11.1 mi)

Follow IN-62/Ohio River Scenic Byway to your destination in Charlestown

7 min (5.3 mi)

Clark County 4-H Fairgrounds

GPS Coordinates 38.413595, -85.671613

2017 Calendar of Events

(Email Bob Cooper to add event dates)



Lexington Model Airplane Club (LMAC)

Numb Thumb Fly.....	Jan 1, 2017
Vintage Radio Control Society Fly-in.....	TBD
LMAC Club Picnic & Fun Fly.....	TBD
Kentucky Fall Classic Fly-in.....	TBD
LMAC Swap Meet.....	TBD



Central Kentucky Float Fly (CKFF)

Charity Float Fly-in Event	TBD
Brown Bag Float Fly-in Event	TBD

Clark County R/C Barnstormers

Annual Membership Meeting.....	TBD
Spring Indoor Fun fly.....	TBD
Glider/Sailplane Fun Fly.....	TBD
Harold Brown Memorial Fly In.....	TBD
Brown Bag Fall Fun Fly.....	TBD
Fall Indoor Fly In.....	TBD



Next LMAC Club Meeting:
Thursday, January 12th at 7:00 PM

Meeting Location:
Morning Pointe Senior Center
150 Shoreside Dr, Lexington, KY
Visitors are Welcome !!

2017 Club Officers

President	- Mickey Breunig	mbreunig@windstream.net
Vice President	- Dan Thompson	wb4guk@aol.com
Secretary	- Mickey Breunig / Bob Cooper	
Treasurer	- Carroll Ware	carroll.ware@gmail.com
Safety Officer	- Mike Lambert	mikeandme1081@yahoo.com
Senior Advisor	- Curtis Adams	cadams5420@windstream.net
News Editor	- Bob Cooper	robert.cooperj@gmail.com
Training Coord.	- Gary Hyde	g_hyde@hotmail.com

**Thanks to Coyote Hobbies for their support to
the Lexington Model Airplane Club**



Coyote Hobbies
Eastland Shopping Center
1301 Winchester Rd. Suite 121,
Lexington, KY 40509
(859) 253-9330
www.coyotehobbies.com



We are Lexington's only family-owned brick and mortar hobby shop! Our primary focus is on remote control vehicles of all types. We offer service and parts for airplanes, helicopters, cars, trucks, drones, as well as 1/24 drag slot cars. All of our staff participates directly in the hobby in some form or fashion. Come see us for all your R/C hobby needs.